

REMARKS

After entry of the present amendment, claims 1-7 and 27-42 are pending in the application. Claims 1-7 and 27-42 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over US 5,750,177 ("Yee")¹. Applicants respectfully request reconsideration and allowance in view of the discussion and Declaration presented herein.

I. Interview Summary

Applicants thank the Examiner for the courtesy of an Interview. Applicants concur with the substance of the Interview provided in the Interview Summary dated March 3, 2008. In the Interview, the Examiner suggested a Declaration be submitted to support the unexpected results that were previously argued over Yee. The Examiner indicated that such a declaration would likely overcome the art of record, but that an updated search may be performed. As suggested by the Examiner, a Declaration supporting the unexpected results over Yee is submitted along with this response.

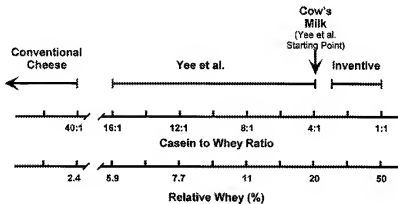
II. The Claimed Cheese Exhibits Melting Points Not Expected From The Data Of Yee.

All independent claims define a process cheese comprising casein and whey proteins with a ratio of casein to whey from about 50:50 to about 75:25. That is, the claims define a process cheese having a casein-to-whey protein ratio of about 1:1 to about 3:1 or about 50 to about 25 percent whey (relative).

As acknowledged in the Office Action dated November 23, 2007, Yee fails to disclose this claimed ratio of casein to whey. (November 23, 2007 Office Action, page 2.) As discussed in the attached Declaration, Yee describes cheese having a ratio of casein to whey between 100:1

¹ The Office Action Summary states claims 1-7 and 27-32 are rejected, but the remarks to the Office Action state that claims 1-7 and 27-42 are rejected as being unpatentable over Yee. Applicants assume that all pending claims 1-7 and 27-42 are currently rejected.

and 4:1 and, preferably, from 16:1 and 4:1². (Declaration, ¶¶ 4 and 5.) This ratio of casein to whey described in Yee results in a cheese having about 5.9 to about 20 percent relative whey. The cheese of Yee, therefore, has a lower amount of whey than required by the cheese of the present application, which results in Yee's cheese having a casein-to-whey ratio above that claimed. As also provided in the Declaration, the Chart below visually illustrates that the casein-to-whey ratios of the claimed cheese are below the ratios of the cheese described in Yee. (*Id.*, ¶ 6.)

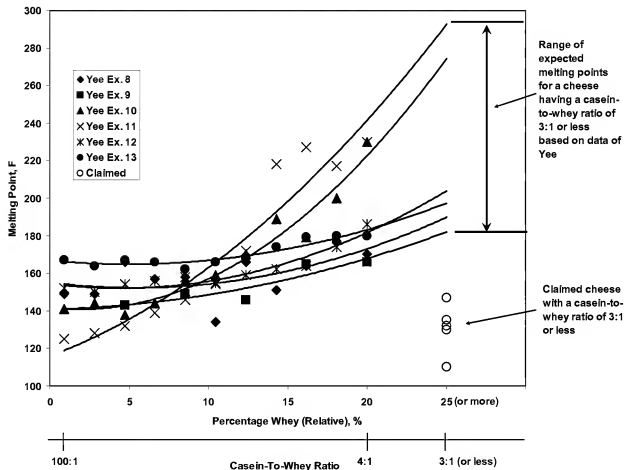


Yee also does not provide or even suggest a method to obtain cheese with higher levels of whey resulting in a lower casein-to-whey ratio. (Declaration, ¶ 7.) However, for the sake of argument, if one assumes that Yee suggests cheese having a casein-to-whey ratio below 4:1 (which it does not), the data of Yee still clearly indicates that such hypothetical cheese would not exhibit melting points within the claimed ranges. (Declaration, ¶¶ 8-12.)

As explained in the attached Declaration, the chart below plots the cheese melting point data from Tables 11-16 in Yee against casein-to-whey ratio (and percentage relative whey). (*Id.* at ¶¶ 9 and 10.) The chart also extrapolates a polynomial regression line for each Example in Yee out to a lower casein-to-whey level to show what melting points one of ordinary skill would expect from the data of Yee for such a hypothetical cheese having a casein-to-whey ratio

² Yee discloses whey-to-casein ratios between 1:16 to 1:4. For consistency with the claims, which recite a casein-to-whey ratio, the ratios of Yee have been reversed to 16:1 to 4:1.

of 3:1 or lower. (*Id.* at ¶ 9) For comparison, the melting points from Examples 1-6 of the present application are also included on the chart to show that the claimed cheese has unexpectedly lower melting points than those expected from the data of Yee. (*Id.* at ¶¶ 10-12.)



As shown in the chart above and explained in the attached Declaration, the extrapolated data of Yee indicates that cheese with an increased level of whey having a casein-to-whey ratio below 4:1 would be expected to have melting points between about 180°F and about 290°F.³

³ Yee also specifically discloses that higher levels of whey provide higher melting points: “One of the well known problems with cheese made by ultrafiltration, and hence containing high levels of whey proteins, is the poor melt properties of the cheese . . . the difference becoming progressively larger as the degree of

(Declaration, ¶ 11.) However, the claimed cheese defines melting points between about 105°F and about 150°F. Accordingly, as described in the Declaration, one of ordinary skill in the art, based on the data of Yee, would expect cheese having the casein-to-whey ratios of the present claims to exhibit melting points much higher than required by the claims. (Declaration, ¶¶ 11-12.) That is, even if it is assumed Yee suggests cheese with casein-to-whey ratios below 4:1 (which it does not), the claimed cheese clearly provides an unexpectedly lower melting point (*i.e.*, about 105 to about 150°F) as compared to the melting points expected from the data of Yee (*i.e.*, about 180°F to about 290°F)⁴. (*Id.*)

concentration is increased.”(Col. 3, lines 45-52.) Therefore, the extrapolated data in the chart is also supported by the disclosure of Yee.

⁴ The Chart provided above is expanded from a similar chart provided in the previous response. The current Chart includes data from all examples 8 to 13 of Yee and the melting point data provided by Yee in all tables 11 to 16. The previous chart only included the data from Example 8 and Table 11 of Yee. The current Chart, therefore, provides further support that the data of Yee plainly does not disclose or even suggest the range of melting points of the claimed cheese.

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Reply to Office Action of November 23, 2007

III. Conclusion

Reconsideration and allowance of claims 1-7 and 27-42 are respectfully requested. The Commissioner is hereby authorized to charge any additional fees which may be required with respect to this communication, or credit any overpayment, to Deposit Account No. 06-1135.

Respectfully submitted,
FITCH, EVEN, TABIN & FLANNERY

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